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Growing Jobs Through Green Investments
Earth-friendly energy creates employment opportunities in N.J.'s hard-hit industries



Daniel Swayze, chief operating officer of PMK Group, at the Bergen County Utility Authority wastewater treatment plant. [Steven J. Dundas]

Industries hit hard by a faltering economy and globalization could realize job growth through increased investment in green energy practices in New Jersey, particularly in manufacturing and construction fields, experts say.

“The whole issue of energy — whether it’s thermal or solar or wind — all of [those] are going to be elements of jobs as we move forward in this economy,” says Bob Loderstedt, president of the New Jersey Manufacturing Extension Program Inc. in Morris Plains. “As we lose some traditional jobs, like textiles, they can and should be replaced with green energy. That’s where you can see a lot of the jobs.”

Recognizing this, the state Board of Public Utilities earlier this month awarded Garden State Offshore Energy — a joint venture between PSEG Renewable Generation and Hoboken-based Deepwater Wind — a \$4 million grant to develop a \$1 billion, 350-megawatt wind farm some 16 miles off the coast of Atlantic and Cape May counties.

The project, which will compete against similar ventures in Rhode Island, Delaware and Massachusetts to become the first offshore wind farm in the United States, will involve the construction of a port facility in New Jersey for the assembly of wind turbines and towers. The facility is expected to employ several hundred of the state’s skilled trade workers, including welders, mechanics, crane operators, electricians and engineers, according to the BPU.

That new employment is just a fraction of the thousands of jobs related to green energy investment — which focuses on reducing use of fossil fuels, boosting energy efficiency and lowering greenhouse gas emissions — that are projected to be created in the state, according to two reports released last month. Experts say such an investment would bolster employment, particularly in industries that have lost large numbers of jobs — between August 2007 and 2008, manufacturing shed 9,900 jobs in New Jersey, and construction lost 4,600 positions, according to the New Jersey Department of Labor.

Gov. Jon S. Corzine's Energy Master Plan, which is expected to be made public this week, calls for 20 percent of the state's energy to be derived from renewable energy sources by 2020. This renewable energy target — along with goals to improve energy efficiency, demand response and new power generation — will require expansion of green jobs, ranging from solar panel manufacturing to HVAC installation, to support increased activity in these sectors, according to the plan.

The Garden State has approximately 352,000 jobs associated with green energy investment, according to the state's labor department. New Jersey could gain more than 57,000 additional green energy-related jobs in two years if it commits significant funds toward retrofitting buildings to enhance energy efficiency, expanding mass transit and freight rail systems, constructing smart energy grids and increasing renewable energy production, says the Political Economy Research Institute at the University of Massachusetts-Amherst, which last month released a study on the impact of green energy investment on job creation.

Green energy investment has produced new types of jobs, says Bob Gerard, chief marketing officer of Birdsall Services Group, a Sea Girt-based engineering and consulting firm. "When we talk about green jobs, the LEED consultant is a new position that wasn't with us a few years ago," Gerard says. Such a consultant ensures that a new or renovated building meets the U.S. Green Building Council's LEED, or Leadership in Energy and Environmental Design, criteria for the design, construction and operation of sustainable properties.

Other new jobs include building commissioning, which is required for a LEED-certified building to ensure that a mechanical or electrical engineering design is built and functioning properly, and establishing a company's carbon footprint or greenhouse gas emissions, Gerard says.

Many jobs coming out of green energy investment, however, are existing jobs that have incorporated new skills, he says. For example, some mechanical contractors, who traditionally have installed boilers, chillers, pipes and electrical wiring, have received training to be able to install solar photovoltaic panels, he says.

Birdsall has created nearly 20 green energy-related jobs in the past two years by increasing demand for the company's energy efficiency consulting, renewable energy consulting and greenhouse gas emissions evaluations, says Dan Swayze, chief operating officer of PMK Group, a division of Birdsall. But given the troubled economy, he says he expects the company's job growth in the near future to be modest. "Clients can only do what they can afford," he says.

Most green energy ventures require only a small number of people to have specialized knowledge, Loderstedt says. In the case of solar panel production, the bulk of the workers needed are machinists and workers in assembly, quality control and mechanical engineering. "You have competencies that can go from industry to industry," Loderstedt says. "You just need to make a few changes and adjustments."

The same goes for a construction industry that, in addition to putting up LEED-certified buildings, is finding new work upgrading properties for energy efficiency. "There's a lot of work taking an older building and retrofitting it for green standards," says Phil Beachem, executive director of the Alliance for Action in Edison.

"There's optimism on the green initiative to create construction jobs."

But job creation hinges on the success and growth of green energy companies, which can find it difficult to obtain early-stage financing to develop new products and services, as noted in the draft Energy Master Plan. The current credit crunch will only exacerbate the situation, says Carl Van Horn, director of the John J. Heldrich Center for Workforce Development in New Brunswick. "You need to infuse capital into the [green energy] market, but with the liquidity crisis, it's hard for any firm to take new approaches," he says. "If capital dries up, it obviously makes it harder to find resources to invest and innovate."

The impact of green energy investment upon job growth still is difficult to gauge, Van Horn says. "There's no doubt that it's increased jobs," he says, but "whether it's a net increase, it's a different story," since many green jobs may simply be offsetting jobs lost elsewhere. Still, green energy investment will be a benefit to New Jersey's economy, he says. "Even if it doesn't increase jobs, it will help us not to lose more jobs."